sibos

WRAP-UP EDITION

Sibos Issues | Sibos 2021 | 11-14 October 2021

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Recharging Global Finance

Dear Sibos delegates,

Each year, Sibos brings together the global financial community to discuss, debate, challenge and drive the changes our industry needs to continue to evolve. And this year's event, taking place fully digitally for the second year, was no exception.

Over four days, more than 19,000 of you joined the Sibos journey to explore the trends and ideas shaping the future – from the rapid pace of digital acceleration to the intensifying focus on sustainability - and prepare today for the client, regulatory and societal demands of tomorrow.

In this wrap-up edition of Sibos Issues, we summarise highlights from the event's 150 sessions along with some of the insights shared by the 250 speakers featured throughout the week. Of course, there is so much more to take in than we could ever capture in a few pages here. So we encourage you to take advantage of Sibos content on demand. Sessions will remain available for registered delegates to view via Sibos.com and the Sibos app through December 2021.

Thank you for the great energy and engagement during Sibos week. And we hope to see you next year, when we are optimistic we will be able to come together again for a physical Sibos in Amsterdam.

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sibos

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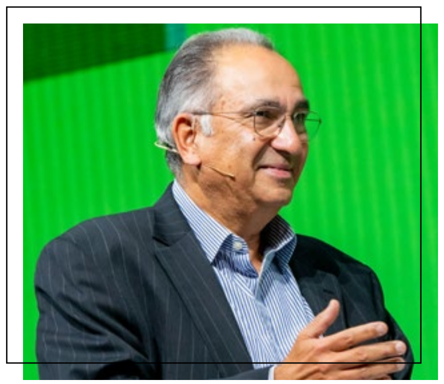
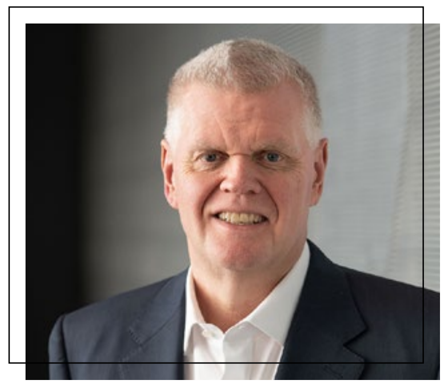
The grand opening



Yawar Shah,
Chair, SWIFT Board of Directors

Javier Pérez-Tasso,
Chief Executive Officer, SWIFT



Noel Quinn
Group Chief Executive, HSBC

"Innovation is at an all-time high in the financial services industry and there is a profound sense of excitement," said Yawar Shah, Chairman of the SWIFT Board at Monday's Sibos opening plenary.

An appropriate beginning to a digital event full of tangible examples of innovation as Sibos discussion topics of recent years moved from theory to execution.

Backed by examples like SWIFT Go and SWIFT's broader strategy for enabling instant and frictionless transactions, SWIFT's Chairman and CEO Javier Pérez-Tasso had their own experiences to draw on to set the scene of innovation this year.

"We have been delivering at pace," said Pérez-Tasso. "This time last year, I talked about our plans to move beyond our traditional high-value segments to enable fast and competitive SME and consumer payments over SWIFT."

Highlighting also how SWIFT's focus had seen it with a foot in the camps of payments, securities, and financial crime compliance, Shah describes its moves as putting "in place pillars for the future". Shah and Pérez-Tasso pointed how central to achieving its aim of enabling instant and frictionless transactions from account to account anywhere in the world is an enhanced platform, which will provide comprehensive transaction management services to orchestrate flows seamlessly.

"We are full speed ahead on our platform transformation," explained Pérez-Tasso. "Next year, we introduce a major deliverable in our journey with our new API-driven transaction manager that lies at the heart of our vision. And once the transaction manager is in full force, when we promise instant, we will really deliver instant."

Along with Shah and Pérez-Tasso's openings, the opening keynote is a standout from each year. Sibos 2021 welcomed Noel Quinn, Group Chief Executive, HSBC, an appropriate global speaker given his experience, and the bank's presence, across Asia, the US and Europe.

Key areas such as sustainability, flexible working and the digital evolution were covered, with Quinn open to stating HSBC would be keen to be on the journey of digital currencies – a question everyone has for the major global banking players.

"I have two criteria that are important," he added. "For a digital currency, particularly for an international bank like us to work, the two attributes are transparency and convertibility."

Complementing Pérez-Tasso's observations on the indsutry's journey towards a much bigger sense of purpose and responsibility, on sustainability, Quinn added that the industry has to wake up to the fact that sustainability has to take a more prominent role going forward than in the past.

Quinn emphasised the need "to be part of that change and lead that change", especially given the bank's global presence.

"I genuinely believe that government, and the businesses and the banking sector and the financial services sector – are all committed to making this [net-zero ambition] a reality," Quinn added.

"I still believe, collectively – we have the capacity to really accelerate [climate] change and to achieve the sustainability objectives. And I sense that urgency in the dialogue I am having with my clients and my stakeholders."

Teach For All

Education is a fundamental right for all children, but for millions around the world it remains inaccessible. This year's official Sibos charity Teach For All, a partnership of 60 independent organisations, recruits and develops teachers for under-resourced schools and communities. Their work ensures children have the opportunity to fulfil their potential.

Sibos has donated 1,000 hours of training to 40 teachers selected across the Teach For All network, and thanks to the support of our delegates and sponsors Bank of America, CGI and Intesa Sanpaolo, we are pleased to have doubled this amount.

As well as donating directly, delegates contributed teaching time by participating in polls during the daily Sibos health challenge, sponsored by NatWest. These sessions focused on exercises and tips to improve mood, decision-making and creativity. If you didn't catch the sessions, look out for the replays on Sibos.com.

Sibos opening
The grand opening

Transformative technology
Getting the human angle right

Carney says it's not too late on climate change

The closing keynote of Sibos 2021 with Mark Carney, UN Special Envoy for Climate Action and Finance painted a picture of what needs to be done and where we stand in the battle against climate change.

Mark Carney, UN Special Envoy for Climate Action and Finance

We've certainly left it very late on climate change, but finance will play an integral role.

Mark Carney, UN Special Envoy for Climate Action and Finance

Hard-hitting, fiery, and – above all – impactful. The closing interview with Mark Carney, UN Special Envoy for Climate Action and Finance, to draw the curtain on a digital Sibos containing many environmental and sustainability discussions was a fitting end to the week.

Most importantly, the Q&A format led by Bloomberg Television's Haslinda Amin made this ending what it was.

For those who have listened to banking CEOs and panels all week discuss climate change and yearned to ask 'how can we move this along quicker?' 'is it too little, too late?' 'what more can be done?' well, Bloomberg's Amin was there to hold Carney and the finance community to account.

"Why isn't this happening fast enough?" asked Amin, to which Carney said "we've certainly left it very late. But there's been a huge shift in the course of the last 18 months. That $88 trillion number [referring to companies that manage $88 trillion who have pledged to pivot to decarbonise their portfolios] was $5 trillion 18 months ago. So a massive move, and for countries, less than one-third of global emissions were covered by net zero objectives. Now it's three-quarters and counting, so we've had a big shift in countries making those commitments.

"We're all, candidly, scrambling to catch up. But I think the good news is that the core of the financial system is ready."

Carney's statistics and action plans struck a number of chords; they were alarming yet reassuring in some ways. Against the backdrop of John Kerry's warning over this being the world's last chance to minimise the worst effects of climate change, Carney discussed how the financial industry is stepping up in the fight, and where work still needs to be done.

"Finance doesn't operate in isolation, so it matters what governments are doing and ultimately finance exists to serve companies and individuals, so the consequences of their actions do as well," said Carney. "But the financial industry are driving positive climate change to get us to net zero by 2050 and so far many financial leaders have made a commitment to the goal."

He added that about one-third of global financial assets have been pledged to pivot to decarbonise their portfolios. Answering questions of "what is a decarbonisation plan? What's best practice for that?" he explained how companies need medium-term targets, in other words, a five-year horizon for those plans you need to disclose.

Amin probed further: are asset managers doing enough? What did Carney think of China's commitment? Should we be seeing more from sovereign wealth funds (SWFs) with $10 trillion in assets.

Carney's responses were that hard numbers will show the efforts of asset managers, when China says it will do something – it usually does, and while SWFs are part of the One Planet initiative they're not in general leading on net zero.

On the SWFs, he added that it partly reflects the jurisdictions. "Many of them are in countries that candidly have not yet themselves committed to net zero, or to clear net zero pathways."

The effectiveness of carbon offsets posed another interesting set of questions. Carney highlighted how they will absolutely play a role. In order to reduce our emissions by about 23 giga tons a lot of things need to happen including ramping up renewables, but he believes that between 8-15% of the work can be achieved through carbon offsets.

He encouraged appropriate evaluations of those carbon offset initiatives and acknowledged various criticisms, while also pointing out that Goldman Sachs was leading the pack in the financial services industry.

To conclude, Amin came back to Kerry's point about it being the last chance for the world to avoid climate disaster. "What could make or break the Paris Agreement?" she asked.

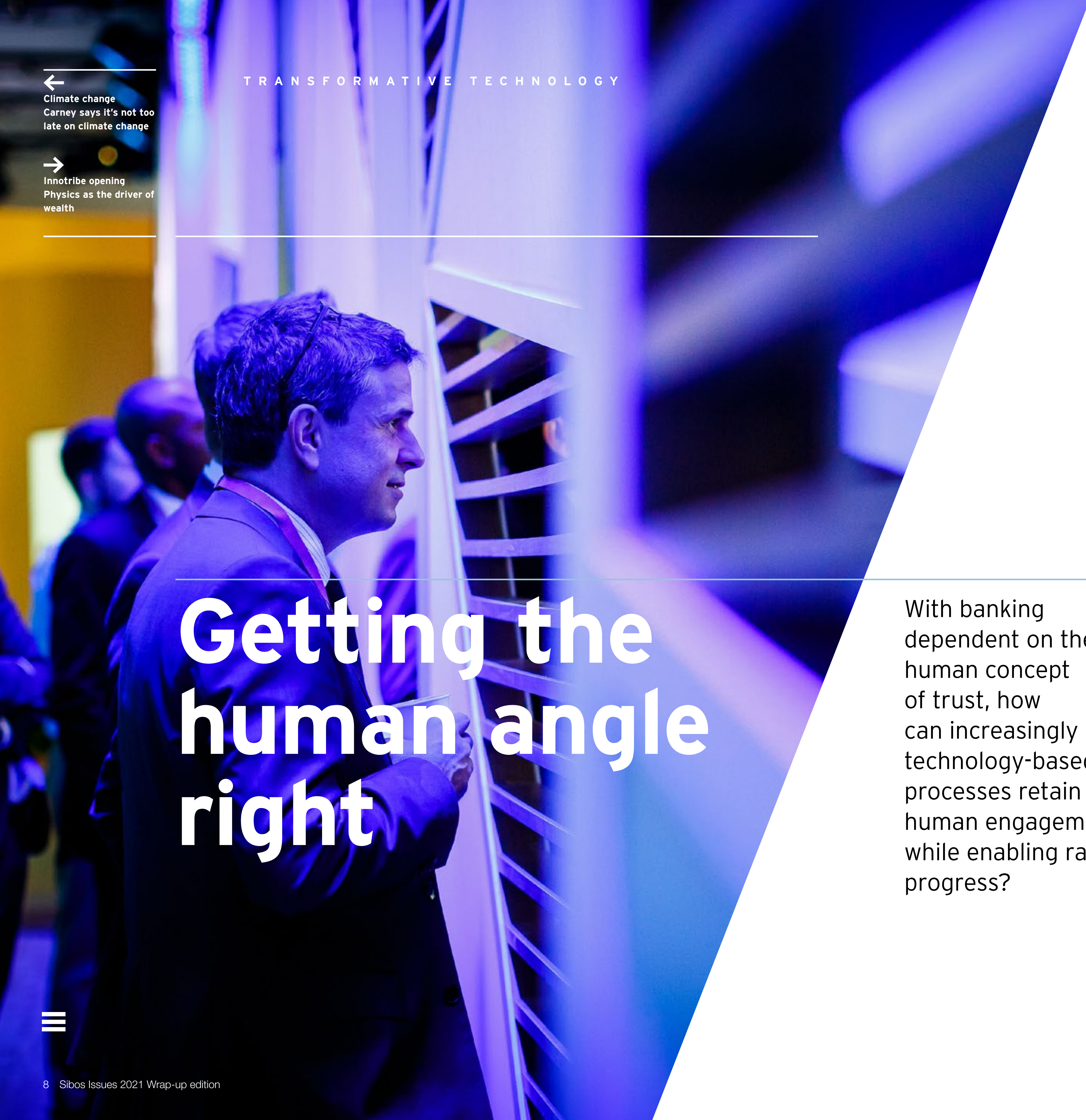
"Finance," Carney said, "and finance delivering and it being very clear – and this is why I really appreciate this opportunity to have this conversation with such an important group here at Sibos."

"Every decision can take climate change into account, so for countries in making their policies and for companies in making their investment and strategic decisions, they can count on finance."

"If those decisions are driving to net zero, that's what we need for Glasgow [COP26], and we have a few weeks to finish the job."

Climate change
Carney says it's not too late on climate change

Innotribe opening
Physics as the driver of wealth



Getting the human angle right

With banking dependent on the human concept of trust, how can increasingly technology-based processes retain human engagement while enabling rapid progress?

> **We see delivery as a hybrid. When it comes to really big life events, the human angle is important, but backed up by digital interaction."**
>
> **Nigel Dobson,** Banking Services Lead, Australia and New Zealand Banking Group

Vasant Dhar, Professor of Information Systems, New York University, and moderator of the session began by reiterating that the financial services industry is built on trust, fairness, inclusion, low latency and low errors. In that context, he suggested a possible contradiction: technology has been largely about disintermediation and disrupting processes. At the same time, issues such as trust and inclusion require human input.

The underlying question, said Bruce Weber, Dean of the Lerner College of Business and Economics at University of Delaware, is when we trust machines and when we want humans involved in decisions. Technology has vast transformative power, but there is a human element to consider at the level of both the individual and the organisation. The big bang of 1986 at the London Stock Exchange, for example, saw the rapid disappearance of the trading floor, the cost of which was borne by trading firms not the exchange. At the same time, he suggested, an analytical data-based approach to decision-making has tended to outperform the 'seat of the pants' intuitive approach.

To understand the bigger picture, said Douglas Arner, Kerry Holdings Professor in Law, The University of Hong Kong, we need to ask what the role is of the financial system in our society. Market-based finance is the best mechanism we have for resource allocation. Technology in this context is fascinating because it has both potential benefits and potential risks. It has a transformative impact on how finance operates, the most recent observable example being during the COVID pandemic along with increasing digitisation more broadly. The question is, can we continue to direct technology in a way that it has a wider sustainable impact?

Nigel Dobson, Banking Services Lead, Australia and New Zealand Banking Group, noted that while he has one team of 500 in India who haven't been to the office in 18 months, the bank also has a responsibility to look after customers' wellbeing. "We see digitisation and automation as good, but not to the exclusion of human interaction," he said. "We see delivery as a hybrid. When it comes to really big life events, the human angle is important, but backed up by digital interaction." He pointed out that technology

> **Banks need to find a way to offer a better deal to people living from pay check to pay check than the services currently on offer.**

Bruce Weber,
Dean of the Lerner College of Business and Economics, University of Delaware

can actually have a positive impact on human interaction. "When running a large organisation with geographically distributed teams, virtual interaction gives all participants a space and a voice. It's exhausting, but the democratisation across large teams has been a great win," he said.

Owning up to error

Dhar acknowledged that over time the financial services industry has managed to get a lot of things right. It provides widely recognised security of deposits and is heavily regulated. He wondered, however, if the sense of trust might be threatened by the fact that new technologies and automation leave less room for error correction. Dhar asked panellists what they saw as the key challenges facing regulators and state actors in maintaining the gains achieved so far.

Arner admitted that the global financial system was, to some extent fragmented, but remained one of the most regulated, globalised and digitised industries. It has, however, depended on economies of scope and scale to function. The increasing centralisation of platforms is in tension with the decentralised mechanisms inherent in new transaction processes.

Weber agreed. There are issues around centralisation versus autonomous hierarchy-free ways of conducting financial business, he suggested. "Who owns processes and responsibility? How do you correct mistakes? Who's answerable? How do we migrate responsibility?" Nevertheless, suggested Arner, the fact that technologies are encouraging us to rethink the way our systems function is one of its greatest benefits.

Is a new regulatory framework needed? "The world has become a lot more complicated for central banks and policy makers," said Arner. "Digitisation means things can develop far faster than before. There is not as much time to think through all the issues." In addition, some of the definitions on which regulation is based are out of date. Many securities laws define securities as stocks, bonds and debentures, which are concepts from the 18th century. "What we need is a functional definition of what we're trying to do. You have to differentiate according to use and function and that is harder," said Arner. "At the same time, the perceived risk of something going bad actually highlights the need to do it."

Weber admitted that regulation is always behind technology, but in considering what was necessary, it was important to distinguish between the two functions of writing the rule book and enforcing the rules. "You need to look at the two separately," he said. "The rule book is out of date, but the enforcement has shown a little more flexibility and open-mindedness." He suggested a move to a more principles-based regulatory regime could facilitate more discretion in enforcement.

These new trends present a challenge for universities and education. "Skill sets and specialisations are different, but there is also a need for management leadership," said Weber. "What are the priorities to be a stronger institution five-to-ten years from now? Technology lowers the cost of everything. Banks need to find a way to offer a better deal to people living from pay check to pay check than the services currently on offer."

← Transformative technology
Getting the human angle right

→ Cross-border payments
Frictionless, instant cross-border payment

Physics as the driver of wealth

Dr Michio Kaku outlines a future where innovation, imagination and creativity will generate wealth.

> **Financial services require data crunching on a massive scale and analysis of that data. This is where artificial intelligence [AI] and quantum computing come in.**
>
> **Dr Michio Kaku**

It is unsurprising that as a theoretical physicist Dr Michio Kaku, opening Sibos' Innotribe sessions, argued that the science of physics has been the greatest driver of wealth generation for the past 200 years. What was surprising was the vast territory and exciting possibilities he covered while presenting his case.

Dr Kaku outlined five waves of innovation driven by physics. He began with the discovery of the laws of thermodynamics in the 1800s, which brought with it the industrial revolution and the vast wealth of the oil barons such as the Rockefellers. The discovery of the physics of electricity and magnetism ushered in the second wave, which generated the wealth of companies such as General Electric and Westinghouse. More recently, the third wave, which centres on quantum physics has created wealth for companies such as Microsoft and Apple.

The emerging fourth wave is based on physics at the molecular level, delivering technologies such as artificial intelligence, biotechnology and nanotechnology.

By mid-century, the fifth wave will be characterised by physics at the atomic level, which will make fusion power possible "unlocking the secret of the stars on earth" said Dr Kaku.

The entities that will benefit from these fourth and fifth waves are not yet clear, he added. What is clear is that each of these revolutions enabled by physics has produced winners and losers.

Describing data as the "new oil", Dr Kaku said bankers would become "prospectors" for data. "Financial services require data crunching on a massive scale and analysis of that data," he said. "This is where artificial intelligence [AI] and quantum computing come in. These technologies will allow pattern recognition, scanning mountains of currently meaningless data to search for the needle in the haystack that will enable a financial institution to crack the stock market or eliminate inefficiencies in their operations."

Quantum computing could render Silicon Valley a "rust belt" as the internet

> **Within 10 years, the fruition of all of the work physicists have been conducting around the world on quantum computing will be realised. In 10-15 years, quantum computers will enter the marketplace and revolutionise society itself.**
>
> **Dr Michio Kaku**

becomes the "brain net", revolutionising communications as users mentally control the internet, hooked up to a vast world of expertise in which AI crunches enormous amounts of data.

These advances in technology and telecommunications are changing the nature of capitalism itself, moving us towards "perfect capitalism" where wealth is generated by intellectual capital - the products of the mind - as opposed to commodity capital, the wealth generated by products of the hands. Dr Kaku believes that by the 2050s the brain will be digitised, opening up the possibility of a new era of telepathy in which thoughts are transferred from person to person.

Advances in AI will dominate the next few decades, he added, touching on every aspect of people's lives. Via virtual or augmented reality people will be connected to AI "creatures" in cyberspace. Users will not be aware that rather than talking to a human expert, such as a medical doctor, they will in fact be talking to an AI robot that can access all of the best medical information on the internet, crunching through that data to diagnose an illness.

In the future the nature of manufacturing will also change with mass production replaced by "mass customisation" thanks to the advent of 3D printing. Items such as shoes could be made to order in a shoe store, jewellery could be designed and printed in a user's living room.

Smart wallpaper

Today's smart phones may seem impressively smart, but in the future, they will be linked to AI servers. What's more, flexible screen technology that has the same qualities as paper will enable smart phone owners to scroll out as much screen as they want. "Flexible screens are also the future of wallpaper - it will become intelligent and you'll be able to talk to the wall, asking it to send an email or call someone," he speculated.

Dr Kaku stressed that AI would not replace jobs, but would act as a "helper" giving on the spot advice to workers. That is already happening in surgery, where specialists can access the online medical files of the patient on whom they are operating.

In Dr Kaku's perfect capitalism, the friction in financial services created by middlemen who cause bottlenecks and choke points will be removed. "Capitalism is imperfect - there are so many hands between you and the product that it is difficult to know what things cost, how valuable they really are. The reason Amazon is creating some of the richest people on earth is that it has digitised the middleman and has made capitalism a bit more efficient."

The winners in this physics-driven, perfect capitalism future will be those who can cut through the noise of innovation and deliver intellectual capital. Innovation, creativity, imagination and leadership are all qualities that AI systems and robots do not have.

Asked how close we are to the world he was describing, Dr Kaku said even now quantum computers were rivalling the best existing digital computers at solving some problems. "Within 10 years, the fruition of all of the work physicists have been conducting around the world on quantum computing will be realised. In 10-15 years, quantum computers will enter the marketplace and revolutionise society itself."

Innotribe opening
Physics as the driver of wealth

Artificial intelligence
AI at scale is on the way

Frictionless, instant cross-border payments

Panellists consider progress to date and journey still to travel in payments reform, both retail and wholesale.

Monday afternoon's Big Issue Debate brought together panellists based in Europe, North America and Asia to compare notes on how the industry is faring in removing cost and friction from global payments systems. Joy Macknight, Editor of The Banker moderated.

She noted that when it comes to payments, the pace of change both in individual markets and cross border was already brisk prior to the COVID-19 pandemic. However, the pandemic had turbo-charged that change as people adapted to COVID working conditions. As a result, many banks were engaged in a re-evaluation of their payments strategies.

Ather Williams III, Head of Strategy, Digital Platforms and Innovation, Wells Fargo, confirmed that the recent accelerated trend from physical to digital was unlikely to be reversed. "Digital engagement is increasing across all customer demographics," he noted. P2P and P2B real-time payments are growing rapidly. At the same time, there has been growth in the number of gig workers. Banks are looking at how to pay out to them faster and how to treat their income when it comes to demand for other financial services. "We've adopted a mobile-first approach, though not mobile-only," said Williams. "There are still a lot of visitors to branches."

Charlotte Hogg, CEO, Visa Europe, agreed that there has been a fundamental shift to digital payments over the past couple of years. Over 80% of face-to-face transactions using Visa are now contactless. "We should, however, be careful in these debates not to lose sight of what payments do for people," she stressed. These benefits are unchanged: helping clients feel secure and in control of their financial life.

A second broad measure of progress in payments reform is competition, said Hogg: how to create an environment and

> **We should not forget whose data it is. We need to explore how to give consumers control over the use of their data.**
>
> **Charlotte Hogg,** CEO, Visa Europe

structure that enables new players to emerge and thrive and make their services inclusive.

Accelerated growth
Instant payment systems were adopted relatively early in Asia at a local level, said Michael Gorriz, Group Chief Information Officer, Technology and Innovation, Standard Chartered. Customers are now starting to demand the same convenience in cross-border transactions. "We experimented very early with partners, initially for remittances," said Gorriz. "When the pandemic hit, there was a rise in demand for these digital services. The pandemic boosted our investment in these areas." Having partnered in early 2015 with a DLT payments provider and having been engaged with mobile wallet providers in Africa, Standard Chartered has accelerated its journey with payment systems based on APIs and built in the cloud.

Hogg also recognised increased innovation and a multitude of new services arising as a response to the pandemic, particularly for SMEs who now recognised the need for omni-channel communications. In June, she said, Visa committed to digitising 50 million small businesses and since then had already reached 15 million.

How much are financial institutions able to do without partnerships. Williams identified two key questions in this regard. The first is what skills are core that need to be retained within the bank's walls, regardless of how things change. The second concerns speed of innovation: what to build within the banks and what to work on with outside organisations.

A key aim of the bank is to embed its services in the experience of users as and when they need to use them rather than having to treat engagement with the bank's products and services as discrete activities.

Macknight asked panellists whether the migration to ISO 20022 standards would facilitate innovation and payments reform. While there was a broad recognition that the richer higher quality structured data enabled by ISO 20222 would have an overall impact of decreasing friction, Hogg cautioned that, "Because you've got one standard, you shouldn't assume you've solved every interoperability problem…Interoperability is an important issue, but it happens at multiple levels." "ISO has helped us up our zero-touch rate, providing better quality of data," said Gorriz. In addition, he noted, there are still some banks in the wholesale space, that do not know how to format a SWIFT message correctly. "ISO 20022 forces them to provide better quality data," said Gorriz. "The biggest advantage is that more precise definition of the data can enhance new opportunities. It's not the silver bullet, but it gets us further down the road."

Hogg meanwhile emphasised that different types of customers want different things from a payment. Even at a retail level, there are different needs in different scenarios. She also drew a distinction between a money transfer and a payment. The former is merely moving money from A to B, but a payment adds value. "We should not forget whose data it is," said Hogg. "We need to explore how to give consumers control over the use of their data."

Unfinished business
Panellists identified a number of areas where there was still work to be done. "I would welcome more of a debate over what resilience needs to look like: what levels of cybersecurity and fraud prevention, for example," said Hogg. "We need to set expectations for the future."

Another outstanding issue is streamlining AML and KYC, said Williams. "How we can solve for digital identity is something we can work to," he suggested. Another goal to work towards, he added is 'hyperpersonalisation' in banking services, using AI and machine learning, citing Amazon or Google as examples of the range of services that can be offered to an individual.

By the end of the panel, participants were happy to acknowledge the progress that the industry had achieved in making payments more efficient and less costly, but were equally willing to acknowledge the journey is still far from over.

←
Cross-border payments
Frictionless, instant
cross-border payments

→
Settlement cycles
The shorter, the
better...to a point

AI at scale is on the way

Transformative AI tech offers efficiency, compliance and other benefits to banks and is proliferating.

Artificial intelligence (AI) in its various guises of machine learning (ML) and natural language processing (NLP), which often powers chatbots and efficiency drives at financial institutions (FI), is a hot topic in banking. Its various end uses span anti-money laundering (AML) compliance enhancements, anomaly detection for various other anti-fraud measures, or the search for alpha on financial markets.

Trade surveillance, high-net worth individual (HNWI) uses in wealth management, customer-churn reduction and targeting are all legitimate end uses too. Cash management help for corporate banking clients and other AI end uses are legion as well.

According to Thomas Siebel, CEO at C3.ai, the market size for the software market in this area is estimated to be US$300 billion in about four years' time. "We're just beginning to scratch the surface," he

> **AI represents an entire replacement market for everything we've done in the enterprise applications space over the last three decades. Everything will be predictive and AI-based in the future.**

Thomas Siebel, CEO, C3.ai

> **Data-driven AI is a journey for us and the entire industry.**

Tom Zschach, Chief Innovation Officer (CIO), SWIFT

> **At Société Générale we've got more than 130 AI use cases and we are trying to use it wherever we can.**

Matthieu Vacarie,
Director of Innovation & Digital Strategy, Global Transaction & Payment Services, Societe Generale

said. "AI represents an entire replacement market for everything we've done in the enterprise applications space over the last three decades. Everything will be predictive and AI-based in the future."

Siebel launched his own namesake company in the 1990s after leaving Oracle, where he was one of the early pioneers, so this tech industry veteran knows an opportunity when he spots one.

AI use cases and benefits

Many banks are already well advanced in adopting AI. Rafael Otero, Chief Information & Product Officer, Corporate Bank, Deutsche Bank, shared his FI's uses that are already in play, such as NLP on operations which can get contacts and content out, so that Deutsche Bank can examine text, or speech via a call centre, and extract valuable data to aid the fight against financial crime, make a contextual 'next best product' offer, or drive a customer-churn reduction effort.

"At Société Générale we've got more than 130 AI use cases," said Matthieu Vacarie, Director of Innovation & Digital Strategy, Global Transaction & Payment Services, SocGen, "and we are trying to use it wherever we can. We've a strong use case in legal document recognition, for instance, where we use it in the investment banking area on market agreements, NDAs and so forth."

"Additionally, our chatbot, which we've been training for three years, has already handled more than four million requests." This is a clear instance where AI is driving operational efficiency at SocGen.

Ethical dilemmas

You need quality data and parameters, cautioned Vacarie, otherwise it could be a case of garbage in, garbage out – and there are ethical concerns about letting AI make decisions – but these can be overcome by always letting humans make the actual decisions. This is especially important in loan decisions where social or racial bias can be baked in if you are not careful.

"This is the gorilla in the room," said Siebel, admitting that AI can perpetuate social and racial bias if it is used to make credit decisions for example. "There are ethical implications in the use of AI and how it might perpetuate bias. It's a trap we need to avoid by being diligent [in designing systems] and always having a human in the loop. In defence, for example, a human always decides whether to fire."

There is also the difficulty with Deep Learning techniques that it is not explainable how decisions have been reached, continued Siebel. To his knowledge, however, no one is building an autonomous AI loan decision-making machine and he is pretty sure they won't "unless they want to be dragged in front of the US Congress or EU in future years to testify".

No one wants that, admitted Deutsche Bank's Otero, stressing that a human in the loop was always front and centre in their thinking, while also noting that: "Rolls Royce are trying to build an explanatory framework to lay out why a Deep Learning model came to a decision, which is interesting purely from a technology perspective. It's nascent, but interesting."

The issue of AI-driven automation taking people's jobs can also perhaps be addressed by re-deploying them elsewhere with appropriate up-skilling help. For society as a whole, there may come a point as well where politicians may have to consider taxing the machines if they want to keep their tax base as income tax falls away. But that is pure speculation at the moment and far off into a possible future.

Privacy

One of the conditions Société Générale has to keep in mind if it wants to use AI at scale is to "always make sure we protect the privacy and anonymity of data," said SocGen's Vacarie, stressing the centrality of this approach in all its AI use cases and how encryption can be used to further provide privacy reassurance.

C3.ai's CEO Siebel agreed with this approach and said how impressed he was with the way banks approach this privacy and the security angle. "They make the US defence agencies look like amateurs when it comes to security," he said. However, there is no reason an ML model that doesn't have any customer information in it – and is deployed in a non-competitive area like AML compliance – couldn't be published to everyone's benefit. "It'd just identify suspicious transactions and patterns that are legitimately of interest. You don't even have to pool data. I'm just talking about sharing a ML model here."

Industry exploration

On that point of AML and fighting financial crime, Tom Zschach, Chief Innovation Officer (CIO) at SWIFT, explained that this will be one of the first uses for a new In-Network Anomaly Detection system that SWIFT is building in conjunction with Red Hat, Kove and C3.ai.

Foundational banks on this project include SocGen and Deutsche Bank. Zschach also urged a call to action. "SWIFT wants to hear what AI projects you are working on and to engage with you and the SWIFT community at scale. Send us an email to: Innovate@Swift.com," he said.

An enterprise AI platform at SWIFT will also bring other internal analytical benefits, as well as providing a platform for the benefit of the industry as a whole.

"Our platform at SWIFT will scale to the requirements of the ecosystem," explained Zschach, when addressing how he envisages the project. "Data-driven AI is a journey for us and the entire industry. We strongly believe in collaboration and pooling minds across our community, so that we can deliver and achieve results." Aggregated minds will amplify what can be achieved in the cross-border payments arena and elsewhere. The initial financial crime use case for this exciting new SWIFT project may scale in the future to find many other new applications. There will be nothing artificial about the benefits that this might bring.

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Growing open ecosystems

How to remain competitive in the new post-pandemic scenario. Opportunities and risks in the era of digitalisation.

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The banking and financial Industry in recent years has had to deal with several new challenges: the entry of new competitors, in particular new entrants from the Fintech world gaining significant portions of market share in some product area, the increasing volatility of pcustomer loyalty caused not only by Fintechs, further increase of regulatory pressure and unprecedented security threats. Building alone own offering is more and more a loser approach, it's become fundamental to become aware parts of an ecosystem where all the players can bring their specific value by integrating with others.

When switching on Strategic Thinking mode, Financial Institutions must today, much more than in the past, assess make / buy / partner options taking into consideration non Financial potential partners. In this context, the Fintech sector is becoming increasingly important for the financial system and for companies' access to credit. Fintech companies are spreading in the most important banks business areas by grabbing important parts of the market. In this context, incumbents must necessarily adapt themselves to new technologies by innovating their systems in order to ensure their survival and growth in a rapidly changing context.

But life is not easy for Fintechs as well: they are realizing how compelling and expensive are regulations demands, marketing initiatives, continuous development of technologies, and competition among themselves. Setting focus to Banks and Financial Institutions, Fintechs are facing for the first time the dilemma: compete or collaborate?. After years where they chose the first way, today Fintech are changing mindset towards a win – win approach, understanding they can thrive only if establish key partnerships with incumbents: traditional banks have kept a very strong customer base despite the attack and upgraded their technology and digital offering at a sufficient level at least in a short-medium term perspective, Fintechs have state of the art technologies, agile and quick organization and processes, and the right mindset based on a mixture of top UX and "Customer Satisfaction comes first". Partnership, collaboration, coopetition turns up to be much more profitable: Fintechs access banks' customers, Traditional Financial Intermediaries cover the technological, cultural and marketing gap that threat their long term sustainability, acquiring better risk assessment tools, reducing transaction costs, making operational management services more efficient, reducing requirements for fixed investments and accessing new markets. On the other side, Banks are very strong when dealing with regulations, something Fintechs thought would have never been an issue on their desk, but that has become more and more a burden on their shoulder, along with incumbents successfully claiming "same level playing field" to regulators. Overall, the scenario consists of more than the (old) Open Banking and the regulatory requirements of PSD2: it's a digital bio-system where entities like Banks and Fintechs attract each other on the basis of a sort of digital bio-compatibility producing new entities that seamlessly exchange data, processes, information and services, building new value-added and tailor-made services for the customers.

Summing up: the selection process in the Banks and Fintechs world has reduced the number of players that can live up to the existing long term trends, Partnerships and perhaps integrations and mergers seem to form the main characteristic of the current context deriving from progressive changes over the last decade; digital services and information crossing entities and industries, mobility are the cornerstones of the new "temple".

Nowadays it's unavoidable to dwell on the consequences of the lockdown caused by COVID-19, Let me spend a few words, while the beast is still alive, about the reactions the crisis that were arranged in Italy, a Country where almost 80% of retail transaction were concluded by use of cash and coins. We have seen and unprecedented turnaround in all sectors of life that have one element in common: the use of the – already available – digital and remote opportunities by all members of society. Digital conferences and lessons, digital payments, ecommerce, digital signature, the same Open Banking just to quote the buzzwords they were all available the same way before the COVID-19, but their access looked like restricted to an elite. Today, even though the underlying cultural change has not yet fully reached the level to be a common widespread social habit, people around the world have experienced new ways of living, working, consuming, and of course paying. Economy and markets are made of a demand and supply side: the change in demand accelerated by the COVID-19 crisis together with the cultural shift that new generations will soon take to it maturity are the structural reason for Financial Institutions to leave the brakes to their inner transformation.

Banks are closing branches (or in some cases, will not reopen branches they closed as a result of the pandemic), the COVID-19 crisis has created an imperative for companies to reconfigure their operations and an opportunity to transform them.

In this scenario, Intesa Sanpaolo has given a greater acceleration on the trend-line it has been driving for years, transforming ebankings and mobile devices into a "channel for relationships" and not only for "transactions", serving companies on the basis of their "corporate digital identity", moving our core functionalities to the cloud in partnership with Google after "micro-servicing" them, and making partnerships and integration with Fintechs, only those that the compatible with Intesa Sanpaolo, the new normal.

We are in the middle of a transformation of the relationship with our customers, Retail, SME, Corporate and Multinationals, towards a digital and multi-channel relational model. Let me list some of the main characteristics.

— Cross Industry information integration. For instance, by API liaising third party partners and providers we have created journeys within our portal, that efficiently drive companies to the key information they need to do new business with other geographies, coordinate information with traditional but digitalized trade finance services, offer advanced reporting.
— Expand the scope of our banking services by offering more comprehensive treasury management capabilities via Fintech partners, including features that extend the reach of traditional treasury management systems. One example is to integrate Kyriba's Dynamic Discounting application into our banking services platform.

Obviously, there are also risks associated with these new ways of operating, which is why it is increasingly necessary for banks and companies to maintain high levels of security through two main components: huge investments in cyber security and constant training for customers and for employees on digitalization issues. I think that everyone in the audience working in Financial Institutions knows what I'm referring to talking of the dramatic escalation of cyber fraud attempts and cyber attacks.

During the continuous listening to the customer for the creation of our digital client journeys, it emerged that companies, although they declare digitalization one of the key points to be on the market, on one hand often lack of sufficient knowledge, awareness, strategy in the area of security, on the other hand they sometimes embrace digital at a different speed than the current trend. For this reason we will keep investing huge resources to facilitate the paradigm shift on both dimensions.

On paper cyber security is in the daily agenda of every company: users who are not always fully trained, hackers who are increasingly able to bring down systems and alter the operations, create massive damage and reduce the level of trust in the use of digital channels. In this context Banks are always between the hammer and the anvil: clients consider security as a feature of the banking product, regardless the behaviors of their users, and criminals consider banks probably the most high ROI subject to which address their illegal efforts.

It is today more than ever necessary to educate and train people, in their role as consumers, users, professionals and managers, towards a digital culture that allows them to have a greater awareness of issues related to cyber security as well as to evaluate the use of digital services and create a new security culture.

In this scenario, the Bank should become a key partner in supporting the training on digital and cyber security issues. It is important to invest with the right partners in order to offer increasingly high levels of security and create systems that allow to operate in safety avoiding as well fraud. Intesa Sanpaolo operates by maintaining the highest standards of security, investing in partnership with Italian Universities, in education and training programs that are offered, through Intesa Sanpaolo Formazione, also to our company clients. At this juncture, Banks are carving out an important space for themselves in this context, offering advice on cyber security and thus trying to make their customers more digital in their operations, but at the same time, and above all more aware of the issue of cyber security.

So, it's significantly clear how only the collaboration between banks, partners and customers in a single collaborative ecosystem will give the boost to create new spaces in the competitive arena, building trust and collaborating to reduce frauds, as a new ways of working.

INTESA SANPAOLO
IMI CORPORATE & INVESTMENT BANKING

Artificial intelligence
AI at scale is on the way

Central Bank Digital Currencies
CBDCs through the bankers' lens

The shorter, the better... to a point

> There is a whole stream of benefits to be gained if we can speed up the settlement cycle.
>
> **Alexis Thompson,** Head of Global Securities Services, BBVA

On the long road to T+0 settlement, many markets must still navigate T+1 which is no easy feat & Europe is still behind. In addition, projects are underway to potentially use distributed ledger technology in the future, principally via DTCC's Ion experiment.

Recently there have been some disagreements between retail market participants, market infrastructures, regulators and institutional investors on the optimum settlement times across various markets.

Take the US as an example, which is just beginning its transition work towards T+1 settlement in a two-year process. This has come amid a meme stock scandal that led to retail trading platform Robinhood speaking before congress calling for real-time settlement, much to the annoyance of the post-trade industry.

Meanwhile, in India, regulators announced a proposed shift to one-day settlement times with just a few months' notice, while giving stock exchanges the option to move forward on T+1 or T+2. This caused outrage to market participants and those looking to attract foreign investment.

During the Sibos 2021 session entitled 'On the road to T+0: The global trend towards shorter securities settlement cycles' however, panellists were in unison on the benefits of a move to T+1 across the US and – eventually – Europe.

"The quicker we can settle a trade, the less risk there is," said Alexis Thompson, Head of Global Securities Services at BBVA. "Even just counterparty risk, companies have gone under in a day. There is a whole stream of benefits to be gained if we can speed up the settlement cycle."

Due to a disparity in market structure complexity, market maturity and technology, markets and asset classes differ on settlement times across the world, but many have an eye on shortening the time. Reduced settlement times come with a significant list of benefits topped by risk reduction, collateral availability and liquidity. Going deeper there could be benefits around corporate actions, securities lending alongside the reduction of settlement fails and risks.

"Risk mitigation is one of the primary benefits of reducing the cycle," said Suzanne Sprague, Managing Director, Credit & Liquidity Risk, Risk Policy, & Banking at CME Group. "It also can increase the speed with which clients can get value out of their collateral. Think about how you're sitting in a limbo state for a day or two, that reduces the usability of those

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Suzanne Sprague, Managing Director, Credit & Liquidity Risk, Risk Policy, & Banking, CME Group

assets for clients. So being able to position for liquidity purposes and margin credit purposes, allows you to optimise your portfolio. You may choose to use different assets for different purposes if you start to see a uniform approach to settlement."

The panel noted how a recent Global Custodian survey, in partnership with Citi, of almost 400 market participants showed that 44% expect the prevailing settlement timeframe around the world for equities to be T+1 within the next five years. The change is inevitable, and beneficial, but where we will end up beyond that – and how we get there – is going to be an interesting space to watch.

BBVA's Thompson added that there is discussion in Europe about whether to go one day more and go to T+1 as there are clear advantages of reducing the cycle, but for now the continent remains in the background in this race.

In the US, the DTCC's proposed shift to T+1 for US equities is very much in motion. The DTCC elaborates a shorter settlement cycle would mitigate systemic risk, operational risk, liquidity needs, buy-side counterparty exposure and broker-to-broker counterparty risk, something echoed by the Sibos panel.

The decision to move forward came after a number of deficiencies and risks in the T+2 settlement cycle were exposed in early 2021 when market participants were subjected to unprecedented margin calls during the meme stock trading saga. However, the market infrastructure insists its work began way before the pressure from the retail market ramped up and timing is purely coincidental.

"In 2017 we started thinking 'what comes next?'" said Michele Hillery, General Manager of Equity Clearing and DTC Settlement Service at the DTCC, referring to the time after its move to T+2. "There is clear economic value in shortening the settlement cycle, in addition to reducing various other kinds of risks," she said. "In 2020 we started engaging with the industry, we looked at the operational benefits, efficiency, liquidity into the marketplace considerations."

DLT

Despite the shifts to T+1, the industry also can't help but explore T+0, whether this is through existing technology and infrastructure or through the use of distributed ledger technology (DLT).

In September, the DTCC said that its alternative settlement platform that leverages DLT, Project Ion, is set for launch next year after demonstrating the viability of supporting both T+1 and T+0 cycles. Project Ion will move into a development phase following a successful prototype pilot with leading market participant firms after six months of testing.

The Project Ion platform will serve as a parallel book and infrastructure for limited bilateral transactions on DLT, with DTC's existing systems remaining the authoritative source of transactions.

RTGS

While T+0 remains on the agenda, participants continuously point to the numerous benefits of netting for the markets, as explained by DTCC's Hillery in the context of calls for real-time gross settlement (RTGS), which is often confused with same-day settlement.

"Our view is that T+0 can and should be achieved, netted T+0 is the next logical step," said Hillery, during the panel. "When you look at real-time gross settlement it means you have to have the securities available for settlement at the time the trade is executed and have the cash available. We process around $1 trillion of securities and we apply a 98% netting factor to that, so that means this tiny fraction of the overall is what settles on a given day…If you want to make that all available you are looking at a very inefficient cash and securities market."

Settlement cycles
The shorter, the better...to a point

Global supply chains
Global supply chain tales from the unexpected

CBDCs through the bankers' lens

Wednesday morning's session on central bank digital currencies (CBDCs) explored whether such a development was viewed positively or negatively by commercial banks.

John Orchard, CEO, Omfif and moderator of Wednesday's CBDC panel, noted that a LinkedIn poll prior to the panel showed that 66% of participants saw CBDCs as an opportunity. He added that the largest experiment to date with CBDCs, run by the People's Bank of China (PBC), is specifically designed not to disintermediate or defund commercial banks, even though some central banks would be happy to see commercial banks under greater competitive pressure, notably in the payments arena.

He began by asking Tom Mutton, Director of the CBDC unit at the Bank of England, why central banks are looking at CBDCs at all. Mutton noted that there are different types of CBDC. A retail scheme provided by a central bank to meet the basic needs of households and business would indeed be a significant innovation as it would introduce a new form of money into the economy. At the moment, retail central bank money is only available in the form of banknotes. On the other hand, said Mutton, "We already have central bank digital money available to wholesale participants in the form of central bank reserves."

The debate around CBDC is about innovation in technology as much as it is innovation in money. "We encourage innovation when it is responsible and safe," said Mutton. "CDBC could be part of that, but we need to check. We should be open minded about innovation."

In Asia, explorations of the potential of CBDC are picking up pace, said Soon Chong Lim, Group Head, Global Transactions Services, DBS. The Monetary Authority of Singapore, for example, is bringing financial institutions and Fintechs together to address the development through a hackathon sandbox. The key development, though, would be if the ECNY pilot being run by the PBC were to be extended for cross-border use, raising issues of

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Tony Mclaughlin, Managing Director, Emerging Payments and Business Development, Citi

interoperability. This could have a major impact on the use of USD in intra-Asian trade.

Of the numerous European projects, Florence Lubineau, Head of Central Banks and MDBs/Supranationals, Europe, BNP Paribas, singled out the ECB's digital euro project, announced in June, which aims to address key issues regarding design, distribution and digital identity. It envisages three years of development following initial investigation, meaning such a digital currency with central bank approval could be a reality in four to five years. Lubineau added a note of caution: in Europe, she said, commercial banks are systemically important and therefore highly regulated. There are therefore some concerns about giving access to central bank money to non-banks.

Appropriate regulation?

For Tony Mclaughlin, Managing Director, Emerging Payments and Business Development, Citi, the importance of CDBC remains to be seen, but if a central bank wants to launch a new payments system, the bank will connect to it. "The regulated community should take a step back and think at a macro level about how to react to unregulated forms of money," he said.

Mclaughlin's own preference would be for a regulated liability network: a single DLT network with central bank and commercial bank participation but with regulated liability appropriate for each type of participant. Policy makers and central banks should look beyond the idea of a narrow CBDC where everyone has to transact in central bank money with the parallel development of individual bank coins.

Prompted by Orchard to comment on the potential benefit of a stablecoin using existing payment platforms coupled with DLT and DeFi platforms for payments, Mclaughlin was sceptical. "I wish commentators would strip stablecoin from the lexicon," he said. The impression from the name is that such instruments are stable, but until they are within the regulated perimeter, there will be concerns.

Whether CBDC is an opportunity or threat to commercial banks depends on design and implementation. While it is clear China, for example, wants to follow a path of a central-bank-orchestrated blockchain network, this may not be true for other central banks. Soon explained that DBS takes the view Pandora's box has already been opened. New forms of unregulated money are being used. Along with them, however, have come smart contracts which allow for conditionality to be embedded in payments. The notion of programmable money has much to offer the financial ecosystem.

He urged industry participants to keep an open mind. "When you combine the 'always on' feature of DLT, the potential of interoperability, whether by asset class or geography, and layer on smart contracts, there is immense potential," he said. The issue is with credit risk and trust.

For Mutton, interoperability among schemes is critical. "Fragmentation causes inefficiency," he stressed. "Our existing framework has provided well. If new forms of money arrive, they must at least elicit the same degree of confidence as what we already have."

Central Bank Digital Currencies
CBDCs through the bankers' lens

Innotribe
The future of money is encrypted and disputed

Global supply chain tales from the unexpected

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> **John Denton,** Secretary General, International Chamber of Commerce

Shocks to the global economy may have bent the global supply chain, but did not break it.

The COVID-19 pandemic, the collapse of oil prices, the blockage of the Suez Canal and geopolitical tensions have all put significant pressure on global supply chains. These topics were framed as increasingly fantastical figures during the Sibos discussion on global trade, 'Black swans, grey rhinos, dragon kings. A tale of 2020 and beyond'.

Most of those who watched the panel would be familiar with black swan events – those that seem impossible. Grey rhinos, on the other hand, are dangerous, obvious and highly probable, while dragon kings are events so extreme that they lie outside a power law distribution. The panel opened with a challenge to the idea the pandemic was, in fact, a black swan (or any other type of beast) event.

"The pandemic was not a black swan," said John Denton, Secretary General, International Chamber of Commerce. "Most companies had factored in pandemics as a risk and had mitigators that were based on the idea there would be global cooperation as was seen during the financial crisis. But that didn't happen – there was an absence of the strong leadership that was seen from the G20 in 2008-2009, when strong policy recommendations were put forward."

Instead, the G20 and G7 "floundered", stymied by geopolitical problems that also damaged the effectiveness of other

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Eric Robertsen, MD, Global Head of Research, Standard Chartered Bank

international bodies such as the World Health Organisation and the World Trade Organisation (WTO), the latter of which "went missing for almost the whole of the pandemic", added Mr Denton.

The premise that mutual self-interest would enable cooperation didn't prove to be true, although the G20 and WTO are making up some ground, he said.

Michala Marcussen, Group Chief Economist at Société Générale, also pointed out that while the pandemic caught many by surprise, there were warnings it could happen. "The preparedness of governments is something that we can learn from," she says. "As we look ahead to the coming years, what strikes me is that COVID-19 accelerated many of the transitions that were already there, including the climate change-related transitions and digital transitions. We need to ensure we are prepared to deal with some of the surprises we may see emerging from these transitions."

Denton agreed there had been a lack of preparedness on the part of policy makers, whose understanding of what they were dealing with and what they should do, didn't match. Many countries' leaders followed the playbook of the global financial crisis and interpreted the consequences of the pandemic as a financial shock. However, the impact on global supply chains was playing out very differently from the financial crisis. Even in developed countries, support mechanisms were found wanting. "One of the most important things policy makers failed to understand was the need to support SMEs. This revealed an underlying problem with the responsiveness of the global system," said Denton.

Policy makers struggle

At the macroeconomic level, policy makers will have to reassess the toolkits at their disposal to deal with such shocks, said Marcussen, while at the micro level, supply chain managers are rethinking their supply chains and how they can improve them as a result of their experiences in the pandemic, she added.

The economic damage that was witnessed at the start of the pandemic, and the economic rebound that has followed, are unparalleled, said Eric Robertsen, MD, Global Head of Research, Standard Chartered Bank. The consequences – some of them unintended – of the enormous fiscal and monetary stimuli that were rolled out globally are yet to fully play out. "As bankers, we will have to contend with a number of large and small surprises over the course of the next few years as the ripple effect of the economic measures taken will come into play," he said. "These will cut across economics, financial markets, policy, vaccine diplomacy and regulatory actions."

Policy makers struggled to address the tension created by the stopgap measures they introduced. The stimulus measures have widened the gap between the haves and have nots, which is a threat to the global economy. Going forward, policy makers must address this, particularly with relation to ensuring all countries have access to COVID-19 vaccines and access to financial capital. The further behind nations fall in terms of GDP to debt ratio, the more difficult it will be for them to access the capital markets and pursue reforms. These countries could move from being vulnerable to becoming completely dependent on other nations, which creates new risks for them.

The pandemic had a serious impact on African economies, with GDP in southern Africa declining by 7% and by around 3% in central Africa. Social, political and financial consequences have underlined a need for structural reform and infrastructure investment, said Cheryl Buss, CEO, Absa International. Stimulus is also needed around intra-African trade, which should be encouraged by the African Continental Free Trade Area. The area covers 1.3 billion people across 55 countries with a combined gross domestic product (GDP) of US$3.4 trillion. "What has come to the fore in Africa is the realisation that countries can no longer depend on the global economy for trade support. There needs to be a bit more independence within its own economies," she said.

Trade was not as badly affected by the pandemic as many had feared, said Marcussen. As global trade moves ahead, the impact of digitisation and climate change needs to be factored into policy frameworks. It is particularly important to address social cohesion within countries and also address the unevenness of how the benefits of trade are spread.

Denton agreed that social cohesion is an important challenge. "There is a bald expectation in policy circles that the economic settings we have are permanent, but they very much rest on people's will. Populism is not extremism – it is the wishes of the people and it shouldn't be taken as a given that populations will accept market forces as an established fact. You have to argue the case for it," he said.

Trade has to work for "people and planet" he said, and the benefits of global trade need to be felt by everyone "uniformly". The ICC is creating centres of entrepreneurship in developing countries to "build more stakeholders who support a market economy".

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John Denton, Secretary General, International Chamber of Commerce

The future of money is encrypted and disputed

What finance and money will look like in 2030 & beyond – CBDCs, stablecoins and cryptocurrencies.

Money has always been disputed because it is about control. Who gets it, how is it distributed, what is its value? Is it spread evenly across classes, how is it represented? These eternal questions were debated at an Innotribe panel discussion about the 'Future of Money'.

The questions are re-surfacing as electronic payments normalise, decentralised blockchain-powered options proliferate, and more centralised programmable central bank digital currency (CBDC) projects spread around the world.

Bradley Leimer, Co-Founder of Unconventional Ventures, which connects founders to funders in the Fintech area, said at the Sibos 2021 Innotribe panel, which is focused on financial technology, that: "90% of central banks are studying CBDCs, 60% have got a Proof of Concept (PoC) and 20% are at the pilot stage." Six out of 10 of the projects are in Asia, he added, alluding to its popularity there.

Defining CBDCs & their implications

Leimer added a definition of CBDCs as well, explaining that money has been notional for a long time now anyway, and that CBDCs are "just a digital fiat currency – what the Bank of England (BoE) calls a digital, not a paper banknote."

However, as the Sibos Innotribe panel discussion expanded to include dystopian and utopian visions of a future in which programmable money might be withheld from workers who hadn't finished their shifts or re-directed towards those truly in need, the complexity of the debate became evident. Would it be better if Facebook's Diem system of permissioned blockchain-based payments had been successful when it was still called Libra. What is its future? Do you want a company to be charge of 'money'? Surely,

> **Retail deposit takers are facing an existential threat. The central banks don't necessarily need them anymore for the money multiplier effect.**
>
> **John Egan,** CEO of L'Atelier, BNP Paribas

governments retain a residual trust in comparison to that outcome?

The design and control, openness and governance of crypto-currencies versus central bank-owned alternatives, and how these mechanisms and money transfer ecosystems might play out, will be crucial in shaping the future. As ever, it is the interaction between people, process and technology that will map out how the future of money, and by implication. society, will look.

Asian interest and the implications for users and banks

According to Bin Ru Tan, CEO of OneConnect Financial Technology, but speaking in her capacity as Co-Chair of the Blockchain Association of Singapore at the Sibos panel, Asia is definitely where it is at in terms of innovation and interest in this space. The possibilities for end users of reduced bank fees, greater and faster cross-border capabilities, and so are on legion, she believes. "For instance, the Monetary Authority of Singapore (MAS) had 170 applications for crypto-currency licences last year from the private sector. It has subsequently issued two licences to progress projects further. The Philippines and Malaysia have followed suit in announcing a call for interested parties to come forward – they are issuing crypto licences now."

"The largest bank in Singapore, DBS, has opened their own digital crypto exchange to learn more about this marketplace in anticipation of its further growth," added Bin Ru Tan, before turning to what the implications for all of this might be for banks. "For example, most banks don't typically offer wealth management type services at the moment or worry about foreign exchange (FX), or act as custodians. That will have to change."

More fundamentally, John Egan, CEO of L'Atelier BNP Paribas, which is the bank's future unit exploring digital and virtual domains, argued that the rise of CBDCs could spell the end for retail banks. "Retail deposit takers are facing an existential threat," he said. "The central banks don't necessarily need them anymore for the money multiplier effect."

BIS' CBDC projects

The Bank for International Settlements (BIS) has its Multiple 'mCBDC Bridge' co-creation project, involving the Bank of Thailand, the Digital Currency Institute of the People's Bank of China, and the Central Bank of the UAE among others, experimenting with how this new technology and currency system might work. The bridge project is exploring the capabilities of the underlying distributed ledger technology (DLT) and the application of CBDCs in enhancing financial infrastructures to better support easier, cheaper and more efficient multi-currency cross-border payments. The intention is to develop a working prototype across multiple jurisdictions. But there are numerous scalability, interoperability, FX, privacy and governance issues to address.

BIS also unveiled a further test involving CBDCs with the central banks of Malaysia, Singapore, South Africa and Australia in September 2021, dubbed Project Dunbar. This is more focused on international settlement, and also aligns with the efforts of the G20 roadmap and its announced intention to enhance cross-border payments.

Cryptocurrencies

"Cryptocurrencies like Bitcoin are philosophically at the opposite end of the spectrum to bank-approved currency options, as they cannot be re-programmed and taken away from you," said Egan. However, these private crypto-currencies although public in spirit, suffer from wild fluctuations in value; are not universal; need energy and tech to operate; and have their own downsides. Bitcoin is now legal tender in El Salvador, but what if a taxi driver there gets paid in it and its value has plummeted by the time he or she gets home?

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>
> **Bradley Leimer,** Co-Founder, Unconventional Ventures

Regardless, Unconventional Ventures' co-founder Leimer, argued that the industry has to respond. "There are trillions of dollars flowing around in crypto-currencies," he said. "Additionally, you've got the issue of Stablecoins and efforts like Tether to try to bring some order to it."

Stablecoins and societal impacts

Stablecoins may be needed to enable seamless transitions between public currencies, private money, data currencies of the future, perhaps even a future energy currency, "which is reflective of environmental values," commented Egan. A way to transfer value between these would be needed. Stablecoins might be the answer. But they are not a panacea and need developmental work as well.

How these future money systems and mechanisms are defined now will have an impact in a few years and dictate what type of society and world we live in – whether it will be dystopian or utopian.

Financial inclusion arguments can be made for crypto-currencies, especially for youngsters in the West who perhaps don't have any other 'assets' having been priced out of the housing market or they might be useful for those that cannot get access to traditional financial services. On the flip side, however, do you want criminals to be able to move money around the world? Again, the control argument comes in – not to mention what is criminal and what is immoral. Ethical dilemmas come into play in this arena.

Unconventional Ventures' Leimer, argued that: "M-Pesa, QR codes, Tencent networks and more 'conventional' developments like these are what have really helped financial inclusion," he said. "They are what give me hope for the 1.7 billion people that are still unbanked worldwide."

Conclusions

One thing that all the panellists at the Sibos' Innotribe debate about the 'Future of Money' could agree on was that more regulation is a certainty, initially of the crypto exchanges to try to ensure stability there. More experimentation and governance work is also inevitable, as established and new mechanisms, and players, battle it out for control of the money supply.

"We are on the precipice of the most significant change in a long time," said L'Atelier BNP Paribas' Egan. Let us hope for a utopian, not a dystopian outcome. It would be wise to remember that just because something is technologically feasible, it does not mean it is desirable. That is why debate in this area is essential. Change is unstoppable, but there is still time to design an ethical framework for 21st century money.

In regard to what banks can do to prepare, Egan suggested that: "Banks need to place themselves in a position where they are ready to make quick decisions." That means pilots, experimentation and internal and community-wide debates should be happening now.

"We are coming to an inflexion point," concluded the Innotribe session moderator, Dr Leda Glyptis, Chief Client Officer at 10x Future Technologies. "Decisions will need to be made soon." That includes regulators, bankers, politicians and everyone else. Money is control, and control is money. Who will have it in the future?

"Everything that is decentralised, eventually becomes re-centralised and monetised in the end," said Unconventional Ventures' Leimer, perhaps signalling how this debate will really play out. If something becomes valuable enough – and that includes crypto-currencies – then it will eventually be brought back into the mainstream. Won't it?

Innotribe
The future of money is encrypted and disputed

Securities
Securities industry cautions against race to zero

Future of work is a hybrid of remote and office based

Leaders, managers and recruiting need to change to match new reality and demands after COVID-19.

The global COVID-19 pandemic has accelerated a move towards enhanced work from home (WFH) options for so-called knowledge workers, with productivity holding up well during this enforced remote period of working. Many employees have enjoyed the experience and want a hybrid mix of home and office-based work in the future.

A Sibos Innotribe panel held during the final day of what is ironically due to be SWIFT's last virtual trade show before a return to a physical event next year in Amsterdam, discussed if the world of work will return to 'normal' after the disruption of closed offices, shops and events, and what that 'normality' might look like.

The Sibos 2021 debate also addressed other WFH drivers, such as the increased digitalisation which has allowed office work to continue remotely on Zoom, Teams and other such platforms, and what the implications of this new world are for

> There are some horrendous equality and diversity implications of AI on recruitment applications.

Naomi Climer, Co-Chair of the UK-based Institute for the Future of Work (IFOW)

how workers are monitored, managed, recruited, tasked, and operate in the future.

Digital work and AI

Increasingly artificial intelligence (AI)-driven apps will proliferate as work is increasingly digitised away from an office. This could impinge on rights and autonomy as micro-managing and surveillance in the home becomes an issue and the flexibility to work when you want to disappears, encouraging unwanted 'presenteeism' online or extra physical hours for drivers or others that have to obey a controlling app. What gets measured as 'good work' will also become an issue. There's also a chance it could have adverse impacts through remote AI-driven recruitment as well, which could reinforce existing gender or racial bias.

Promotions could even be given by AI based on perceived success in hitting metrics, but who put those metrics in place and are they valid?

Diversity and leadership

"There are some horrendous equality and diversity implications of AI on recruitment applications," warned Naomi Climer, Co-Chair of the UK-based Institute for the Future of Work (IFOW) think tank, during the Sibos Innotribe panel. She argued for AI that is appropriately designed, audited, and managed with human inputs. "Then it has the potential to do good. But a lot of systems have been rushed in after COVID-19 hit. I've been disappointed to have some good discussions in boardrooms as a non-executive director about AI bias – only to then see them crack on with it anyway because it's 'too difficult to undo'."

"This ignores the fact that there is plenty of research that shows that diversity delivers better results. It's a business advantage," said Climer, while admitting it can be harder to manage if the senior team are all alike, and are not used to dealing with different ideas and perspectives. That is a problem they must overcome, however, as it is that difference that delivers better results and innovative ideas.

The same applies to loud extroverts who typically dominate an office environment and often get promoted versus more introverted types who get the job done. Who should be in charge and get promoted, and how can you cater for these different types of personalities if you are a leader in a digital world with remote staff? New skills will have to be added.

"Outside of the office world, I've spoken to an Amazon driver in the UK who was very unhappy about his lack of autonomy," continued Climer. "The way they are monitored is horrendous. My interviewee got so many seconds on a doorstep to make a delivery and no autonomy whatsoever. This was despite the fact he was a local and often knew better than what the AI app was directing him to do."

"Let's not forget those who cannot work remotely either because they are a driver, or work in a restaurant or hospitality," cautioned Climer, as the Sibos Innotribe debate turned to how the COVID-19 disruption has perhaps permanently impacted city centres, commuting patterns, and indeed how we live our lives in the 21st century.

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Naomi Climer, Co-Chair of the UK-based Institute for the Future of Work (IFOW)

"Remember, we also live in a world with Glassdoor, where former employees can anonymously review and score companies, so what you do matters," cautioned Climer. "It tells people who they want to work for, and who to avoid."

Changing office work

There will be a global scramble for talent as some remote workers refuse to go back into the office after COVID-19. Previous restrictions about how close you need to be to an office to commute will also fall away. "People can live where they want now," said Chris Herd, Founder & CEO of Firstbase, which provides WFH solutions. "The old '30 mile' circumference rule around London, New York, or other global cities no longer applies."

This means that firms who try to force everyone back into the office will continue to have a restricted recruitment pool in the future, whereas others can access remote workers from around the world to their benefit. "I'm predicting a wave of staff turnover in the next 18 months," said Herd, for this reason. "The churn will be the highest we have ever seen."

"We don't have to have a dystopian AI-dominated future either, or try to replicate what went before," continued Herd, as he turned to the benefits of the WFH 'new normal' situation that has arisen after the global pandemic. "Indeed, when you talk about the future of work, what you are really debating is the future of living. We can make this a positive thing."

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Chris Herd, Founder & CEO of Firstbase

"Think about if insisting on a hybrid model of working in an office Tuesday-Thursday during set hours which precludes school drop-offs or pick-ups is really flexible enough for the modern worker," said Herd. Particularly one who has just gone through a global pandemic and got used to having more flexibility than that. As long as the job gets done does it matter where the employee is at any given time?

The benefits of the 'new normal'

Essentially, make your staff happy and you will succeed was Herd's key message to the Sibos Innotribe audience, as he listed the benefits of remote working, in terms of: Increased flexibility for workers, wider talent pools, Increased diversity of opportunity. Additionally, single parents, those with caring obligations or other responsibilities, can now contribute thanks to WFH practices. A culture change with new types of people, bringing new ideas, can refresh companies.

"Those that shun change will die," said Herd, warning the financial services (FS) audience present at Sibos that it has "seen an exodus of talent for years now" to tech firms and others who are more flexible. Unless you give people 'good work' then they won't stay regardless of how much you pay them – as that is only one element in a good work / life balance.

Defining what is 'good work' was important to IFOW's Climer, as she believes it needs to span pay, hours, autonomy, flexibility, culture, diversity and so on. All of these things need to be addressed following the COVID-19 pandemic, which presents a tremendous re-set opportunity to engage with staff and find out what it is that they actually want.

Hybrid working may be necessary, but that is OK. "I'm talking to a number of companies that see it as a way to reduce office costs," said Climer. It can be a win-win. "Diversity can also deliver better results," she reiterated, if it is properly thought through in recruitment and management processes. Technology assessments and AI involvement should also be aligned with human intellect and involvement to prevent bias and give opportunities to all.

Innotribe
Future of work is a hybrid of remote and office based

Climate change
Financing the transition to a net-zero carbon economy

Securities industry cautions against race to zero

Sibos 2021 panellists agree on positive impacts of penalties to enforce market discipline on participants and cut settlement fails, but urge caution on the race to zero per cent fails and time to invest in data warnings and collaborative efforts.

Some trades fail to settle. This is an accepted truth across geographies and asset classes.

But following intense market volatility in March 2020 and incoming regulations, market infrastructures and other securities services providers are now looking to provide settlement failure prediction solutions to clients through data and transparency.

"There is no one-solution-fits-all when it comes to all the challenges we have around settlement efficiency," said Clearstream's Head of Investor Services and Financing, Samuel Riley. "Is it one specific asset class or one specific market? I don't think so, there are nuances. But I do think it continues to be a problem. The complexities of markets today,

> We find that a natural fail rate of somewhere [between] 5% or lower, is the sign of a well-functioning and efficient marketplace. The race to zero – in the sense of zero fail rates – isn't in the interests of the industry.

Steve Wager,
Head of Direct Custody and Digital Asset Product Development, BNY Mellon

particularly in the ability to trade and settle in securities that are issued in multiple countries, this is a complexity that adds to the problem."

The panel 'Success in stopping settlement fails: What will it take?' explored the introduction of regulation, new technologies and data sharing as solutions to solving the global issues around settlement which spiked during the market volatility in March 2020, particularly for market players without straight-through processing (STP) in place.

The securities services industry has seen settlement failure prediction solutions launched by the likes of Euroclear, Clearstream and Deutsche Bank – while SWIFT has also made itself open to collaborating and solving these issues – in response to incoming Settlement Discipline Regime (SDR) penalties set to apply daily fines.

Informing clients of fails

There has also been collaboration and work with Fintechs such as AccessFintech to bring data solutions to market.

Incoming penalties will certainly be a catalyst for market participants to seek solutions, but service providers are looking to use historical data and trends to inform clients ahead of fails.

Steve Wager, Head of Direct Custody and Digital Asset Product Development at BNY Mellon presented findings from BNY Mellon about the causes of fails during the session, which shed some light on why some trades fail.

"We did some research," Wager explained. "Over the cause of 12 months in US and developed markets, 77% of our fails are down to locate issues, this means typically the brokers don't have the inventory available – I don't want to use the term short-selling – but typically they won't have the shares available for them to settle, in equities, a locate issue, and that's the primary driver. Secondarily, is really 'trade is not known'; this could come down to allocation issues, flow issues."

"Lastly, only 2% of what are identified as factors for fails are down to incomplete SSIs; what that shows is that we as an industry have spent a lot of time on this and there's been real tangible success."

Peter Sneyers, CEO of Euroclear Bank, then added: "It's often related to not having securities available to settle the trade; there we can help with developing more intelligent tools and work with clients to anticipate it, maybe use AI to predict certain fails – enabling them to act faster and then add value through avoiding penalties for those fails."

Wager did, however, throw out a strong caution against a race to zero on percentage rates, which may have surprised many.

> If we get the information from the clients about where their asset is located it might help the custodian to help handle the SSI very well.

Pataravasee Suvarnsorn, Managing Director at Thailand Clearing House

"We find that a natural fail rate of somewhere [between] 5% or lower, is the sign of a well-functioning and efficient marketplace," said Wager. "The race to zero – in the sense of zero fail rates – isn't in the interests of the industry. Obviously, we have concerns, including the $3 billion of costs in relation to fails, we want to address that. However the small number of fails we get in developed markets allows us flexibility in settlement models, financing capabilities, client constructs, etc. So it's something to be worked on but I'm not sure zero [per cent] is the answer for us either."

For market participants, knowing the cause of a fail could be crucial in avoiding mounting costs in Europe.

With representatives from Euroclear and Clearstream – who sit in the middle of a European market set to contend with SDR and reeling from a spike in settlement fails from the start of the pandemic – the discussion boasted key players within the process, both of whom have a clear vision of the issues at-hand and the roadmap for an efficient future.

As mentioned, both have also implemented some predictive models for settlement fails, based on historical patterns, and suggested information could have a ripple effect within the market. "It may change an individual's decision on who they partner with or trade with, but without the ability to share that in a more public way it's not going to change the overall market situation. There are other aspects that are helping, there are other providers and data aggregators working with institutions and then sharing that data back and forth."

Both the international central securities depositories (ICSDs) agreed that the SDR penalties should have a positive impact, but like the majority of participants, questioned the effect of mandatory buy-ins.

"You want to create a sense of urgency on one hand and you can do that with the penalty regime, but you don't want to have side impacts which are bigger than solving the original problem itself and that is the problem with buy-ins," said Euroclear Bank's Sneyers.

Pataravasee Suvarnsorn, Managing Director at Thailand Clearing House, added that buy-ins can "help reduce the impact of the problem, but it's not the solution to solve the problem."

Standards & data sharing

The topic of standards came up in a positive way, but it was agreed that they need to be updated and followed in order to be effective.

She also led calls for a data sharing as a solution to more transparency and insight into why some trades fail.

"If we get the information from the clients about where their asset is located it might help the custodian to help handle the SSI very well," said Suvarnsorn, at Thailand Clearing House.

Clearstream's Riley concurred that data sharing is occurring but it's not as simple as it may appear.

"There is evidence of it because there are Fintechs collaborating on aggregating transaction and settlement data," he explained. "To the point around willingness to share data, to solve the situation you don't need to share everything, just some elements. There are examples out there of collaboration. They tend to be more successful when it's a network or a start-up or organisation that worked together."

Looking to the future, it was agreed that distributed ledger technology (DLT) will play a major role, but the shift won't happen overnight. Market infrastructures and custodians alike have an eye on the developments to ensure they won't be disintermediated, but ultimately the benefits and tools based off the back of such technology will enhance efficiencies in the market and ultimately reduce fails and associated costs.

"A shift to DLT or similar solution is important but it won't happen overnight," added Euroclear Bank's Sneyers. "If you look at what needs to happen, there are important elements in the puzzle, like how the old works with the new. Is it going to be data or a platform? I don't know. What we saw for corporate actions, years ago was information was very important as it gave you a competitive advantage. But then over time it disappeared because we moved more towards collaboration."

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Securities
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Confidential computing
Confidential computing is the future

Financing the transition to a net-zero carbon economy

How financial institutions can help in the fight against climate change and keep companies honest.

How the transition to net zero greenhouse gas emissions by 2050 – as required by the Paris Agreement on climate change – is financed is a critical issue. In the lead-up to the UN's Climate Change Conference (COP26) at Glasgow in November, many organisations, including financial institutions, are expected to join those that have already stated their transition commitments.

In his opening keynote discussion at Sibos, Noel Quinn, Group CEO of HSBC, said in the coming 10-15 years some dramatic changes will take place, with industries having to change their technology bases and transform business models. "Companies in carbon-heavy industries will have to migrate to a carbon-light business model

There is a lot of work to do but I genuinely believe that governments, businesses and the financial services sector are committed to making the transition to a net-zero carbon economy a reality.

Noel Quinn, Group CEO, HSBC

Financial institutions must set short- and long-term, science-based zero emission targets.

Amy West, Global Head of Sustainable Finance & Corporate Transitions, TD Securities

A transition will help firms to future-proof their businesses.

Yulanda Chung,
Head of Sustainability,
Institutional Banking Group,
DBS

and that will require significant funding," he said. That is an opportunity for banking institutions, he added.

"There is a lot of work to do but I genuinely believe that governments, businesses and the financial services sector are committed to making the transition to a net-zero carbon economy a reality," he said.

More detail about the role financial institutions can play was heard during a panel session on climate change.

Abyd Karmali, Managing Director, ESG Line of Business & Client Advisory at Bank of America (BoA), said there were four key areas in which banks need to act on climate change:

— Alignment with the Paris Agreement. BoA has joined the UN-convened Net Zero Banking Alliance, which he says is emerging as the "gold standard" within the financial services sector in giving information on best practice and how to align emissions, lending and other capital markets activity

— Ambition – convey to all clients and other stakeholders that the transition to net zero is imminent. BoA has committed $1.5 trillion in capital to help clients with the transition to net zero

— Advocacy – work with different stakeholder groups, including governments, to ensure action is taken on the climate. Government policy would give the industry "tailwinds"

— Appetite – increasing the risk appetite to step in early with investment in technologies and countries with the biggest requirements to scale up to make the transition.

The risk appetite aspect, from a risk framework perspective is challenging, he said.

Options for transition
The panellists agreed that divestment from companies in carbon-intensive industries or those with high emissions is not the answer as it will "clean" an individual financial institution's portfolio but won't reduce emissions in the real economy. The role of banks should be to engage with companies and help them to transition.

Yulanda Chung, Head of Sustainability, Institutional Banking Group, DBS, says the notion of stranded assets and difficulty in accessing funds on the capital markets is "a powerful incentive" for clients to transition to net zero. "A transition will help firms to future-proof their businesses," she said. But a transition must be credible, based on a "desired destination". There are many pathways for companies, particularly in carbon-intensive industries, to reach net zero, including technologies such as carbon sequestration, whereby atmospheric carbon dioxide is captured and stored, she added.

Another pathway to net zero is via carbon offsets and carbon offset credits. A carbon offset is a reduction in GHG emissions (or an increase in storage such as tree planting) that compensates for emissions that occur elsewhere. A carbon offset credit is a certified transferrable instrument that represents an emission reduction of one metric tonne of CO2, or an equivalent amount of other GHGs. The purchaser of an offset credit can retire it to claim the underlying reduction towards their own GHG reduction goals. How offsets are traded and their credibility ensured will be a key theme in the financial services sector in the coming years, says Amy West, Global Head of Sustainable Finance & Corporate Transitions, TD Securities. "Billions of dollars are needed for transition and how we interface with the carbon markets will be key."

A perennial problem for banks – data transparency – also exists within the climate change world. The Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) has been created to improve and increase reporting of climate-related financial information. The aim is to provide financial markets with clear, comprehensive, high-quality information on the impacts of climate change. This includes the risks and opportunities presented by rising temperatures, climate-related policy, and emerging technologies.

Chung believes if the TCFD were made mandatory it would make life easier for investors to scrutinise the performance of companies and banks. "DBS is very supportive of better data and we are working with the regulator in Singapore on industry-wide efforts to develop a common platform to which people can contribute data and act as a common standard on which investment decisions can be made," she said.

Measurable targets
TCFD is a "good start", added West, that if leveraged or implemented in the US would be a "huge step" in the direction of establishing it as a global standard. Transparent data will help banks to understand their portfolios and where emissions are coming from.

Banks must understand their portfolios and where emissions are coming from. "This is simple to say, but as a large bank, difficult to deliver on," says West. "Financial institutions must set short- and long-term, science-based zero emission targets. We saw a very active proxy season this year as investors and activists held organisations to account. It was uncomfortable, but it will instil accountability in organisations."

Financial institutions shouldn't overestimate – or underestimate – the importance of their actions versus what can be done at the government level, said Laurent Adoult, Head of Sustainable Banking, FI & SSA Europe, Crédit Agricole. Action by financial institutions is "absolutely necessary" but not sufficient on its own. "Around COP26, I expect some financial institutions will be making further net zero commitments, but these shouldn't draw attention away from the actions that are required by governments; we are at a crucial moment and a lot is at stake."

Karmali adds a third "force" in the fight against climate change – investors. "They have been ahead of the pack on climate change and are sharpening up what they are asking of the companies in which they invest. They have made it clear that the transition to net zero is inevitable and are asking some tough questions. The quality of dialogue between companies' C suites, investors and financial institutions as intermediaries/advisers has vastly improved," he said. "Companies can no longer get away with a superficial climate strategy, there has to be a lot of detail."

Climate change
Financing the transition to a net-zero carbon economy

Sibos 2022

Confidential computing is the future

Confidential computing is the future. "If there is one thing you should take away from this virtual Sibos to go and discuss further with your chief technology officer it's that," said CTO Richard Brown, of the R3 blockchain company during a Spotlight on Transformative Technology entitled 'Going Deeper with Data'. "There is an opportunity now if you seize it before it becomes table stakes," he added.

"There is an opportunity now if you seize it before it becomes table stakes," says R3 CTO, as discussion explores the opportunities and challenges of confidential computing.

Confidential computing will solve the problem of having no technological control over what third-parties do with data, after you share it with them. This problem can theoretically be solved by software cryptographic techniques that are currently the subject of academic papers that use phrases like zero knowledge proofs and so forth, said Brown.

But there are issues of expense, resiliency, skills and so forth that mean development time is needed. The real push will come from chip manufacturers. CPU makers

The data couldn't be used for any other purpose, even if the third party wanted to. That is confidential computing. It's a step change in how we can build services

Richard Brown, CTO, R3

are looking at the problem of how to build systems that protect data when it's in someone else's hands by fundamentally re-thinking how computers work. "In future, services that can prove cryptographically how data will be processed will be possible. If you think about transaction monitoring, and how you might send sensitive data to a third party to look for patterns and matches, then the advantage of knowing that is the only thing it'd be used for is obvious. The data couldn't be used for any other purpose, even if the third party wanted to. That is confidential computing. It's a step change in how we can build services," concluded Brown.

Connected digitalisation is the new baseline. We can no longer operate as individual self-contained entities behind borders [or silos].

Kahina Van Dyke, Global Head of Digital Channels & Data Analytics, Standard Chartered

It does away with the need to scrub data clean and eliminate any sensitive fields, or aggregate, redact or anonymise it; employ an army of lawyers or accountants and auditors for that matter; while silos of valuable data can be eliminated when it's no longer deemed too dangerous to share information with a third-party.

Data is the new oil

The other takeway from this session, and something echoed across Sibos this year is that data is the new oil. As Kahina Van Dyke, Global Head of Digital Channels & Data Analytics, Standard Chartered, said: "The future of the financial services (FS) ecosystem will be digital and data-driven, but most importantly it will be interconnected," alluding perhaps to the way open application programming interfaces (APIs) will link front-ends and embed finance into customers everyday lives. "Connected digitalisation is the new baseline. We can no longer operate as individual self-contained entities behind borders [or silos]."

Standard Chartered is responding to the data-centric future by investing in people and skills, as well as the technology as it all needs to align. New ways of thinking by newcomers to the industry are welcome, she said. Standard Chartered is also responding by, making platform investments: "We've accelerated and expanded these and are focused on data dashboards, ecosystems and data tech tools," explained Van Dyke.

She added the bank was also implementing new ways of working: via agile methodologies implemented one and a half years ago to encourage "daily stand-up meets across functions" breaching team barriers or silos that impede innovation and fresh thinking.

Van Dyke also explained how 24x7 fast operations are vital, that banks must always be on for clients and people. It's not acceptable to just say the server is down anymore. Resilience, coordination, orchestration, and connectivity all go together.

Finally, but crucially, diversity is vital. This includes "diversity of thought", said Van Dyke, and new leadership styles that can cope with increased work from home (WFH) practices, for instance, which have been prevalent during the COVID-19 outbreak. WFH also opens up new opportunities for new voices and people to enter the industry from different backgrounds and localities, as does the trend towards open API-powered partnerships and the model of delivering an ecosystem of services. Collaboration will be vital in this data-driven globalised future.

"Innovation is what keeps us in business. But diversity is what will help us solve our problems," said Van Dyke, alluding to the diversity of talent, thought, ways of working and approaches that are required in the future. "We must make sure that diversity is in the DNA of everything that we do."

In emerging markets, a speciality for Standard Chartered, digitalisation can mean investment can go in where historically it hasn't before. "In Africa alone we've added 700,000 new customers through our digital channels," said Van Dyke. "98% of our customers are acquired digitally."

The days of paper, branches and unconnected silos are numbered. Data mastery is destiny in the future.

We must make sure that diversity is in the DNA of everything that we do.

Kahina Van Dyke,
Global Head of Digital Channels & Data Analytics,
Standard Chartered

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